

1        **I. CLAIMS**

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3        What is claimed is:

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5        1.     A pool cleaner control device comprising:

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7        A)     a skimmer assembly submerged in a body of water and having  
8               first housing means with a bottom wall including a bottom  
9               outlet port and a filter basket assembly mounted within said  
10              first housing means;

11  
12       B)     cover means mounted over said filter basket assembly having  
13               first and second inlet through openings and a shaft through  
14               opening, said cover means further including valve means for  
15               selectively closing said first inlet through opening;

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17       C)     second housing means including an internal wall and a bottom  
18               wall, and said second housing means being mounted below  
19               said cover means and within said filter basket assembly;

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21       D)     piston means including a bottom surface and a top surface and  
22               being mounted within said second housing means, said piston  
23               means being axially movable within said second housing  
24               means and further including an elongated tubular shaft with  
25               first and second ends said first end mounted through said  
26               piston means and extending to said bottom surface and said  
27               shaft slidably passing through said cover means with said  
28               second end extending outwardly through said shaft through

opening a predetermined distance above said cover means and inside said body of water;

E) a flexible diaphragm skirt having a substantially hemispherical shape and including a peripheral edge, said diaphragm skirt mounted to and covering said bottom surface, and said peripheral edge mounted to said internal wall to prevent water inside said second housing and below said diaphragm skirt from passing above said diaphragm skirt;

F) means for restricting the diameter inside said elongated tubular shaft so that water enters through said second inlet through opening and through said second end thereby forcing said piston means to move towards said cover means and when said piston means reaches said cover means said valve means is opened permitting water to enter to said first inlet through opening and closing said second inlet through opening; and

G) a suction pump having an inlet connected to said bottom outlet port so that the water displaced from said first housing means is replaced with water passing through said cutout and said filter basket assembly from said second housing and the space left is taken by water passing through said second inlet opening and by said piston means being urged upwardly and limited by said restricting means until said piston means reach said cover means and said actuating means cause said valve means to open.

1        2.     The device set forth in claim 1 further including:  
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3        H)     spring means for urging said piston means away from said  
4             cover means.  
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6        3.     The device set forth in claim 2 wherein said actuating means  
7             includes a flexible means having third and fourth ends with said  
8             third end being attached to said second end and said fourth end  
9             being cooperatively engaged to said valve means to cause said valve  
10            means to open and close in response to the position of said second  
11            end.  
12

13       4.     A pool cleaner control device comprising:  
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15       A)     a skimmer assembly submerged in a body of water and having  
16             first housing means with a bottom wall including a bottom  
17             outlet port and a filter basket assembly mounted within said  
18             first housing means;  
19

20       B)     cover means mounted over said filter basket assembly having  
21             first and second inlet through openings and a shaft through  
22             opening, said cover means further including valve means for  
23             selectively closing said first inlet through opening;  
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25       C)     second housing means including an internal wall and a bottom  
26             wall, and said second housing means being mounted below  
27             said cover means and within said filter basket assembly;  
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1 D) piston means including a bottom surface and a top surface and  
2 being mounted within said second housing means, said piston  
3 means being axially movable within said second housing  
4 means and further including an elongated tubular shaft with  
5 first and second ends said first end mounted through said  
6 piston means and extending to said bottom surface and said  
7 shaft slidably passing through said cover means with said  
8 second end extending outwardly through said shaft through  
9 opening a predetermined distance above said cover means and  
10 inside said body of water;  
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12 E) a flexible diaphragm skirt having substantially the shape of a  
13 cup and including a peripheral edge, said diaphragm skirt  
14 mounted to said bottom surface, said peripheral edge  
15 cooperatively coacting with said internal wall to prevent water  
16 inside said second housing and below said diaphragm skirt  
17 from passing above said diaphragm skirt;  
18

19 F) means for restricting the diameter inside said elongated tubular  
20 shaft so that water enters through said second inlet through  
21 opening and through said second end thereby forcing said  
22 piston means to move towards said cover means and when said  
23 piston means reaches said cover means said valve means is  
24 opened permitting water to enter to said first inlet through  
25 opening and closing said second inlet through opening; and  
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27 G) a suction pump having an inlet connected to said bottom outlet  
28 port so that the water displace from said first housing means is

1 replaced with water passing through said cutout and said filter  
2 basket assembly from said second housing and the space left is  
3 taken by water passing through said second inlet opening and  
4 by said piston means being urged upwardly and limited by  
5 said restricting means until said piston means reach said cover  
6 means and said actuating means cause said valve means to  
7 open.  
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9 5. The device set forth in claim 4 further including:  
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11 H) spring means for urging said piston means away from said  
12 cover means.  
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14 6. The device set forth in claim 5 wherein said actuating means  
15 includes flexible means having third and fourth ends with said third  
16 end being attached to said second end and said fourth end being  
17 cooperatively engaged to said valve means to cause said valve means  
18 to open and close in response to the position of said second end.